INDEX TO VOLUME 12

A

Aberration, the Vergency Effect on Spherical (G. W. Moffitt), 47.
Aberration of the Eye (Charles Sheard), 79.
ABORN, ROBERT H., GEORGE L. CLARK, and ELMER W. BRUGMANN: A New Multiple X-Ray Spectrograph Combining the Powder Diffraction and Monochromatic Pinhole Methods, 379.
Acceleration Due to Gravity, A New Method for Measuring the (Donald S. Piston and Albert L. Fitch), 659.
Activator, Uranium as an (Edward L. Nichols and Mabel K. Slattery), 449.
ADAMS, ELLIOT Q.: A General Utility Reading-Lens for Burettes and Thermometers, 375.
Aircraft Instruments (Franklin L. Hunt), 227.
ALLEN, FRANK: The Variation of Visual Sensory Reflex Action with Intensity of Stimulation, 493.
Astigmatic Images with Special Reference to the Sensitivity of Test Charts Used in Refraction, The Distribution of Light Intensity in (Jonas S. Friedenwald), 491.

B

BEHR, LEO: A New Relative Humidity Recorder, 623.
BIDWELL, CHARLES C.: Wire and Ribbon Wound Resistance Furnaces, 495.
Bilirubin, A Comparison of the Van Den Bergh Method and Spectro Photometry in the Determination of (Charles Sheard), 477.
Biological Problems, Some Applications of Spectrophotometry to (Charles Sheard), 477.
BITTINGER, CHARLES: Report of the Committee on Color Terminology Questionnaire, 478.
Black Body, The Luminous Properties of the (Herbert E. Ives), 75, 475.
BREIT, G.: Polarization of Radiation Scattered by an Electronic System in a Magnetic Field, 195.
Bridge, A Double Percentage (A. C. Longden), 131.
BRIGGS, R. M., A. L. SCHOEN and M. L. DUNDON: Neocyanine: A New Sensitizer for the Infrared, 397, 485.
BROWN, GEORGE E. and CHARLES SHEARD: Some Further Studies in the Photomicrography of the Skin Capillaries and Their Significance, 478.
BRUGMANN, ELMER W., ROBERT H. ABORN, and GEORGE L. CLARK: A New Multiple X-Ray Spectrograph Combining the Powder Diffraction and Monochromatic Pinhole Methods, 379.
Burette and Thermometer Reader (Elliot Q. Adams), 375.

C

Caesium Vapor, Photo-Ionization and Relative Absorption Probabilities of (F. L. Mohler, Paul D. Foote, and R. L. Chenault), 486.
Camera for Photographing the Interior of a Rifle Barrel (I. C. Gardner and F. A. Case), 159.
Capacities, Measurement of Small (J. C. Jensen), 69.
CASE, F. A. and I. C. GARDNER: A Camera for Photographing the Interior of a Rifle Barrel, 159.
CHAMOT, E. M.: Chemical Microscopy: Its Aims and Possibilities, 478.
CHENAULT, R. L., F. L. MOHLER and PAUL D FOOTE: Photo-Ionization and Relative Absorption Probabilities of Caesium Vapor 486.
Chromatic Aberration of the Eye (Charles Sheard), 79.
CLARK, GEORGE L., ELMER W. BRUGMANN and ROBERT H. ABORN: A New Multiple X-Ray Spectrograph Combining the Powder Diffraction and Monochromatic Pinhole Methods, 379.
COBLENTZ, W. W. and C. W. HUGHES: The Spectral Energy Distribution of the Light Emitted by Some Plants and Animals, 494.
Color Terminology Questionnaire, Report of the Committee on (Charles Bittinger), 478.
Colorimeter, A Trichromatic Additive (Carl W. Keuffel), 479.
Colorimetric Purity, The Computation of (Deane B. Judd), 482.
Comparison of X-Ray and White Light Exposures in Photographic Sensitometry (R. B. Wilsey and H. A. Pritchard), 484.
Condensers, Aspheric Enlarging (L. V. Foster), 489.
COX, R. T. and C. J. PIETENPOL: A Device for Detecting Small Changes in an Electric Current, 691.

D

DAHL, O. and H. U. SVERDRUP: Two Oceanographic Current-Recorders Designed and Used on the "Maud" Expedition, 537.
Density, The Relation Between Diffuse and Specular (Clifton Tuttle), 483, 559.

Diffraction Grating Images and Interference Figure Images as Formed by a Microscope Objective (L. V. Foster), 489.
Dispersion in the Extreme Ultraviolet, Greater (R. J. Lang and Stanley Smith), 523.
Dispersion of X-Rays, On the theory of (R. de L. Kronig), 547.
DODD, L. E.: The Adaptation of the Phonelescope as a Precision Pitch Indicator, and an Application to Vocal Tones, 119.
DUNDON, M. L., A. L. SCHOEN, and R. M. BRIGGS: Neocyanine: A New Sensitizer for the Infrared, 397, 485.
Dunoyer Meniscus Lenses for Use in Spectrograph (G. S. Fulcher), 476.

E

Electric Currents, A Device for Detecting Small Changes in (R. T. Cox and C. J. Pietenpol), 691.
Electrical and Photoelectric Properties of Thin Films of Rubidium on Glass (Herbert E. Ives and A. L. Johnsrud), 486.
Elements of the Second Long Period, Spectral Structures for (W. F. Meggers and C. C. Kiess), 417.
ELLETT, A., PAUL D. FOOTE and F. L. MOHLER: Polarization of Radiation Excited by Electron Impact, 486.
ELSEY, HOWARD M.: An Oxygen-Gas Glass Blowing Lamp, 697.
Eppley Cells at High Temperatures (Warren C. Vosburgh), 393.
EWING, SCOTT: Measurement of the Light Scattering Coefficient of Some Saturated Vapors, 15.
Eye, Chromatic Aberration of the (Charles Sheard), 79.

F

FAIRCHILD, C. O. and H. T. WENSEL: Methods and Computations in Optical Pyrometry, 474.
FAIRCHILD, C. O., W. H. HOOVER and M. F. PETERS: A New Determination of the Melting Point of Palladium, 474.
Faraday Effect in Sputtered Iron Films (Hillel Poritsky), 485.
FITCH, A. L.: The Measurement of Impedances with the Vacuum Tube Voltmeter, 71.
FITCH, ALBERT L. and DONALD S. PISTON: A New Method for Measuring the Acceleration Due to Gravity, 659.
Fluorescence and Concentration in Solid Solutions, The Relation Between Intensity of (Ernest Merritt), 613.
FOOTE, PAUL D., R. L. CHENAULT and F. L. MOHLER: Photo-Ionization and Relative Absorption Probabilities of Caesium Vapor, 486.
FOOTE, PAUL D., F. L. MOHLER and A. ELLETT: Polarization of Radiation Excited by Electron Impact, 486.
FORBES, GEORGE SHANNON and PHILIP ALBERT LEIGHTON: Relations Involving Internal Pressure, Intensity, Mercury Transfer, Cross-Section, and Electrical Conditions in Mercury Vapor Lamps, 53.
FOSTER, L. V.: Aspheric Enlarging Condensers, 489.
FOSTER, L. V.: Diffraction Grating Images and Interference Figure Images as Formed by a Microscope Objective, 489.
FSIEDENWALD, JONAS S.: The Distribution of Light Intensity in Astigmatic Images with Special Reference to the Sensitivity of Test Charts Used in Refraction, 491.
FULCHER, G. S.: Analysis of Recent Measurements of Viscosity of Glass, 478.
FULCHER, G. S.: Dunoyer Meniscus Lenses for Use in Spectrograph, 476.
Furnace, The Carbon Tube (Arthur S. King), 503.

G

GAGE, SIMON H.: The Microscope: Its Development and Some Recent Improvements, 488.
Galvanometer Deflection by the Photoelectric Cell, Linear Amplification of (F. E. Null), 521.
GARDNER, I. C.: An Optical System for Reading Angular Deflection of a Mirror, 490, 529.
GARDNER, I. C., and F. A. CASE: A Camera for Photographing the Interior of a Rifle Barrel, 159.
Gas-Washing Bottle, A New Spiral (Lowell H. Milligan), 518.
GIBSON, K. S. and F. K. HARRIS: A Spectrophotometric Analysis of the Lovibond Color System, 481.
Glare and Visibility, The Fundamentals of (L. L. Holladay), 271, 492.
Glass Blowing Lamp, An Oxygen-Gas (Howard M. Elsey), 697.
Glass and Its Refractivity and Density, Regarding the Heat Treatments of (A. Q. Tool, L. W. Tilton and E. E. Hill), 490.
Gravity, A New Method for Measuring the Acceleration Due to (Donald S. Piston and Albert L. Fitch), 659.
GYEMANT, A.: A New Intensimeter for Ultraviolet Rays, 65.

H

HALL, VINCENT C. and EMERY HUSE: On the Relation Between Time and Intensity in Photographic Exposure, 483.
HALL, VINCENT C., LOYD A. JONES and EMERY HUSE: On the Relation Between Time and Intensity in Photographic Exposure, 321.
HARRIS, F. K. and K. S. GIBSON: A Spectrophotometric Analysis of the Lovibond Color System, 481.
HARRISON, THOMAS R.: A New Electrical Recorder, 165.

HILL, E. E., A. Q. TOOL, and L. W. TILTON: Regarding the Heat Treatments of Glass and its Refractivity and Density, 490.
HOLLADAY, L. L.: The Fundamentals of Glare and Visibility, 271, 492.
HOOVER, W. H., M. F. PETERS and C. O. FAIRCHILD: A New Determination of the Melting Point of Palladium, 474.
HOPFIELD, J. J.: Capillary Valves for Gases, 391.
HUGHES, C. W. and W. W. COBLENTZ: The Spectral Energy Distribution of the Light Emitted by Some Plants and Animals, 494.
HULBURT, E. O.: A Laboratory Mercury Lamp, 519.
Humidity Recorder, A New Relative (Leo Behr), 623.
HUNT, FRANKLIN L.: New Types of Aircraft Instruments, 227.
HUSE, EMERY and VINCENT C. HALL: On the Relation Between Time and Intensity in Photographic Exposure, 483.
HUSE, EMERY, VINCENT C. HALL and LOYD A JONES: On the Relation Between Time and Intensity in Photographic Exposure, 321.
Hydrogen, A Classification of the Lines of the Secondary Spectrum of (William Mayo Venable), 487.

I

Impedances, Measurement of (A. L. Fitch), 71.
INGERSOLL, L. R.: Report of the Committee on Physical Optics, 485.
Intensimeter for Ultraviolet Rays (A. Gyemant), 65.
Intensities and Reflecting Powers in the Lyman Region of the Hydrogen Spectrum (A. H. Pfund), 467.
Interference, An Illusion Due to Pattern (L. B. Tuckerman), 488.
Interference Figure Images and Diffraction Grating Images as Formed by a Microscope Objective (L. V. Foster), 489.
Ionization Energy of HCl (Edwin C. Kemble), 1.
Iron Films, Faraday Effect in Sputtered (Hillel Poritsky), 485.
IVES, HERBERT E.: Retiring Presidential Address, 483.
IVES, HERBERT E.: Some Photographic Problems Encountered in the Transmission of Pictures by Electricity, 173.
IVES, HERBERT E.: The Luminous Properties of the Black Body, 75, 475.
IVES, HERBERT E. and A. L. JOHNSRUD: Electrical and Photoelectric Properties of Thin Films of Rubidium on Glass, 486.

J

JENSEN, J. C.: The Measurement of Small Capacities, 69.
JOHNSON, H. M.: Retinal Excitation by Means of Neural Drainage, 493.
JOHNSRUD, A. L. and HERBERT E. IVES: Electrical and Photoelectric Properties of Thin Films of Rubidium on Glass, 486.
JONES, L. A.: Report of the Committee on Photographic Standard of Intensity, 483.
JONES, L. A. and E. M. LOWRY: Retinal Sensibility to Saturation Differences, 492.
JONES, LOYD A., EMERY HUSE, and VINCENT C. HALL: On the Relation Between Time and Intensity in Photographic Exposure, 321.
JONES, L. A. and OTTO SANDVIK: Spectral Distribution of Sensitivity of Photographic Materials, 401, 484.
JUDD, DEANE B.: The Computation of Colorimetric Purity, 482.

K

KELLNER, HERMANN and HENRY F. KURTZ: Modern Laboratory Spectrometers, 475.
KEMBLE, EDWIN C.: On the Energy Required to Split HCl into Atomic Ions, 1.
KEUFFEL, CARL W.: A Simple Spectrophotometer, 476.
KEUFFEL, CARL W.: A Trichromatic Additive Colorimeter, 479.
KIESS, C. C. and W. F. MEGGERS: Spectral Structures for Elements of the Second Long Period, 417.
KING, ARTHUR S.: The Carbon Tube Furnace, 503.
KRONIG, R. DE L.: On the Theory of Dispersion of X-Rays, 547.
KUNZ, J. and V. E. SHELFORD: Turning on and off Lights with the Photo-electric Cell, 693.
KURTZ, HENRY F. and HERMANN KELLNER: Modern Laboratory Spectrometers, 475.

L

LADD-FRANKLIN, CHRISTINE: The Blue Arcs of the Retina: "Seeing Your Own Nerve Currents," 494.
LANG, R. J. and STANLEY SMITH: Greater Dispersion in the Extreme Ultraviolet, 523.
LANGER, R. M.: Atmospheric Absorption and Transmission in Searchlight Practice, 359.
Laue Photographic Apparatus (John T. Norton), 27.
LEIGHTON, PHILIP ALBERT and GEORGE SHANNON FORBES: Relations Involving Internal Pressure, Intensity, Mercury Transfer, Cross-Section, and Electrical Conditions in Mercury Vapor Lamps, 53.
Lenses, Dunoyer Meniscus for Use in Spectrograph (G. S. Fulcher), 476.
LONGDEN, A. C.: A Double Percentage Bridge, 131.
Lovibond Color System, A Spectrophotometric Analysis of the (K. S. Gibson and F. K. Harris), 481.

LOWRY, E. M. and L. A. JONES: Retinal Sensibility to Saturation Differences, 492.
Luminous Properties of the Black Body (Herbert E. Ives), 475.
Lyman Region of the Hydrogen Spectrum, Intensities and Reflecting Powers in the (A. H. Pfund), 467, 487.

M

MARSH, H. E.: Further Experiments on the Theory of the Vane Radiometer, 135.
MEGGERS, W. F. and C. C. KIESS: Spectral Structures for Elements of the Second Long Period, 417.
Mercury Arcs, Characteristics of (George Shannon Forbes and Philip Albert Leighton), 53.
Mercury Lamp, A Laboratory (E. O. Hulburt), 519.
MERRITT, ERNEST: The Relation Between Intensity of Fluorescence and Concentration in Solid Solutions, 613.
Microphotometer, A New Form of Thermoelectric (Edison Pettit), 477.
Microscope, The: Its Development and Some Recent Improvements (Simon H. Gage), 488.
Microscope Objective, Diffraction Grating Images and Interference Figure Images as Formed by a (L. V. Foster), 489.
MILLIGAN, LOWELL H.: A New Spiral Gas-Washing Bottle, 518.
MOFFITT, G. W.: A Simple Method for Obtaining Optical Contact, 490.
MOFFITT, G. W.: The Vergency Effect on Spherical Aberration as a Function of the Parameters in Certain Classes of Telescope Objectives, 47, 489.
MOHLER, F. L., A. ELLETT and PAUL D. FOOTE: Polarization of Radiation Excited by Electron Impact, 486.
MOHLER, F. L., PAUL D. FOOTE and R. L. CHENAULT: Photo-Ionization and Relative Absorption Probabilities of Caesium Vapor, 486.
MUNSELL, A. E. O. and PRENTICE REEVES: Value Sensitivity and Value Scales, 481.

N

NELSON, D. M.: Photographic Spectra of Tribo-Luminescence, 207.
Neocyanine: A New Sensitizer for the Infrared (M. L. Dundon, A. L. Schoen, and R. M. Briggs), 397, 485.
NICHOLAS, WARREN W.: An X-Ray Spectrometer, with which Wave Lengths are Read Directly on an Ordinary Micrometer Screw, 45.
NICHOLS, E. L. and MABEL K. SLATTERY: Uranium as an Activator of Luminescence, 449, 487.
NORTON, JOHN T.: An Instrument for the Rapid Production of Laue Photographs, 27.
Notes, see special index page.
Notices:
Kellner, G. A. Hermann: Obituary Notice, 611.
Election of Officers of the Optical Society of America, 270.
NULL, F. E.: Linear Amplification of Galvanometer Deflection by the Photoelectric Cell, 521.

O

Oceanographic Current-Recorders Designed and Used on the "Maud" Expedition, Two (H. U. Sverdrup and O. Dahl), 537.
Optical Contact, A Simple Method for Obtaining (G. W. Moffitt), 490.
Optical Pyrometry, Methods and Computations in (H. T. Wensel and C. O. Fairchild), 474.
Optical System for Reading Angular Deflection of a Mirror, An (I. C. Gardner), 490, 529.

P

Palladium, A New Determination of the Melting Point of (C. O. Fairchild, W.H. Hoover, and M. F. Peters), 474.
Percussion Figures (C. V. Raman), 387.
PETERS, M. F., C. O. FAIRCHILD and W. H. HOOVER: A New Determination of the Melting Point of Palladium, 474.
PETTIT, EDISON: A New Form of Thermoelectric Microphotometer, 477.
PFUND, A. H.: Intensities and Reflecting Powers in the Lyman Region of the Hydrogen Spectrum, 467, 487.
Phonelescope as a Precision Pitch Indicator (L. E. Dodd), 119.
Photoelectric Cell, Turning on and off Lights with the (J. Kunz and V. E. Shelford), 693.
Photoelectric and Electrical Properties of Thin Films of Rubidium on Glass (Herbert E. Ives and A. L. Johnsrud), 486.
Photographic Exposure, On the Relation Between Time and Intensity in (Emery Huse and Vincent C. Hall), 483.
Photographic Exposure, On the Relation Between Time and Intensity in (Loyd A. Jones, Emery Huse, and Vincent C. Hall), 321.
Photographic Intensity, Report of O. S. A. Committee on Unit of, 567.
Photographic Materials, the Spectral Distribution of the Sensitivity of (L. A. Jones and Otto Sandvik), 484.
Photographic Sensitometry, A Comparison of X-Ray and White Light Exposures in (R. B. Wilsey and H. A. Pritchard), 484.
Photo-Ionization and Relative Absorption Probabilities of Caesium Vapor (F. L. Mohler, Paul D. Foote, and R. L. Chenault), 486.
Photomicrography of the Skin Capillaries and Their Significance, Some Further

Studies in the (Charles Sheard and George E. Brown), 478.
Physical Optics, Report of Progress Committee for 1924–25, 587.
Pictures, Transmission by Electricity (Herbert E. Ives), 173.
PIETENPOL, C. J. and R. T. COX: A Device for Detecting Small Changes in an Electric Current, 691.
PISTON, DONALD S. and ALBERT L. FITCH: A New Method for Measuring the Acceleration Due to Gravity, 659.
Polarization of Radiation Excited by Electron Impact (A. Ellett, Paul D. Foote and F. L. Mohler), 486.
PORITSKY, HILLEL: Faraday Effect in Sputtered Iron Films, 485.
Portrait of the Retiring President, Optical Society of America, facing, 172.
Potentiometer, Radiation (Donald C. Stockbarger), 349.
Potentiometer, Some Applications of the AC (T. Spooner), 217.
Pressure Recorder (Irving B. Smith), 655.
PRIEST, IRWIN G.: Standard Artificial Sunlight for Colorimetric Purposes, 479.
PRITCHARD, H. A. and R. B. WILSEY: A Comparison of X-Ray and White Light Exposures in Photographic Sensitometry, 484, 661.

Q

Quartz, Data on the Flow of Electric Current in (V. E. Whitman), 31.

R

Radiation Excited by Electron Impact, Polarization of (A. Ellett, Paul D. Foote and F. L. Mohler), 486.
Radiometer, A Sensitive Nichols (Otto Sandvik), 355.
Radiometer Experiments on the Theory of the Vane (H. E. Marsh), 135.
RAMAN, C. V.: The Optical Study of Percussion Figures, 387.
RAYTON, W. B.: Report of the Committee on Progress in Geometrical Optics, 489
Recorder, A New Electrical (Thomas R Harrison), 165.
REEVES, PRENTICE and A. E. O. MUNSELL: Value Sensitivity and Value Scales, 481.
Reflecting Powers and Intensities in the Lyman Region of the Hydrogen Spectrum, 467.
Report of the Committee on Photographic Standard of Intensity (L. A. Jones), 483.
Report of the Committee on Physical Optics (L. R. Ingersoll), 485.
Report of the Committee on Progress in Geometrical Optics (W. B. Rayton), 489.
Report of O. S. A. Committee on Unit of Photographic Intensity, 567.
Report of Progress Committee for 1924–25, Physical Optics, 587.
Resistance Furnaces, Wire and Ribbon Wound (Charles C. Bidwell), 495.
Resistance, Ionductance and Capacity, Detection of Small Changes in (L. S. Taylor), 149.
Resonance Radiation in a Magnetic Field (G. Breit), 195.
Retina, The Blue Arcs of the (Christine Ladd-Franklin), 494.
Retinal Excitation by Means of Neural Drainage (H. M. Johnson), 493.
Retinal Sensibility to Saturation Differences (L. A. Jones and E. M. Lowry), 492.
Retiring Presidential Address (Herbert E. Ives), 483.
Reviews:
ELLIS, CARLETON and ALFRED A. WELLS: The Chemical Action of Ultraviolet Rays, 502.
EWALD, P. P.: The Reflection and Refraction of Light as a Problem of Electron Theory, 545.
FRANKE, ERNST: Ocular Therapeutics, 164.
KAYSER, H.: Table of Wave Numbers, 134.
LUCKIESH, M.: Foundations of the Universe, 129.
PARKINSON, ROY H.: Eye, Ear, Nose and Throat Manual for Nurses, 558.
Rubidium on Glass, Electrical and Photoelectric Properties of Thin Films of (Herbert E. Ives and A. L. Johnsrud), 486.

S

SANDVIK, OTTO: A Sensitive Nichols Radiometer, 355.
SANDVIK, OTTO and L. A. JONES: Spectral Distribution of Sensitivity of Photographic Materials, 401, 484.
Scattering Coefficient of Vapors (Scott Ewing), 15.
SCHOEN, A. L., R. M. BRIGGS and M. L. DUNDON: Neocyanine: A New Sensitizer for the Infrared, 397, 485.
Searchlight Practice, Atmospheric Absorption and Transmission in (R. M. Langer), 359.
Sensitivity of Photographic Materials (L. A. Jones and Otto Sandvik), 401.
Sensitizer for the Infrared (M. L. Dundon, A. L. Schoen, and R. M. Briggs), 397, 485.
SHEARD, CHARLES: A Comparison of the Van Den Bergh Method and Spectrophotometry in the Determination of Bilirubin, 477.
SHEARD, CHARLES: Some Applications of Spectrophotometry to Biological Problems 477.
SHEARD, CHARLES: The Chromatic Aberration of the Eye, the Chromatic Variations in the Interval of Sturm and Allied Phenomena as Determined by a Subjective Method of Skiascopy, 79.

SHEARD, CHARLES and GEORGE E. BROWN: Some Further Studies in the Photomicrography of the Skin Capillaries and Their Significance, 478.
SHELFORD, V. E. and J. KUNZ: Turning on and off Lights with the Photoelectric Cell 693.
Skin Capillaries and Their Significance, Some Further Studies in the Photomicrography of the (Charles Sheard and George E. Brown), 478.
SLATTERY, MABEL K. and E. L. NICHOLS, Uranium as an Activator of Luminescence, 449, 487.
SMITH, IRVING B.: Recording Small Pressure Differences, 655.
SMITH, STANLEY and R. J. LANG: Greater Dispersion in the Extreme Ultraviolet, 523.
Solid Solutions, The Relation Between Intensity of Fluorescence and Concentration in (Ernest Merritt), 613.
Spectral Distribution of the Sensitivity of Photographic Materials (L. A. Jones and Otto Sandvik), 484.
Spectral Energy Distribution of the Light Emitted by Some Plants and Animals, The (W. W. Coblentz and C. W. Hughes), 494.
Spectral Structures, Report of Progress Committee for 1924–25, 587.
Spectral Structures for Elements of the Second Long Period (W. F. Meggers and C. C. Kiess), 417.
Spectrograph and a Simple Spectrometer for High School Laboratory Students (R. A. Wetzel), 475.
Spectrometers, Modern Laboratory (Hermann Kellner and Henry F. Kurtz), 475.
Spectrometer and an Inexpensive Spectrograph for High School Laboratory Students (R. A. Wetzel), 475.
Spectrophotometer, A Simple (Carl W. Keuffel), 476.
SPOONER, T.: Some Applications of the AC Potentiometer, 217.
Standard Cells at High Temperatures (Warren C. Vosburgh), 393.
STOCKBARGER, DONALD C.: The Radiation Potentiometer, 349.
Sunlight for Colorimetric Purposes, Standard Artificial (Irwin G. Priest), 479.
SVERDRUP, H. U. and O. DAHL: Two Oceanographic Current-Recorders Designed and Used on the "Maud" Expedition, 537.

T

TAYLOR, L. S.: Detection of Small Changes in Resistance, Inductance, and Capacity by Means of an Oscillating Circuit, 149.
Telescope Objectives, The Vergency Effect on Spherical Aberration as a Function of the Parameters in Certain Classes of (G. W. Moffitt), 489.
Tenth Annual Meeting of the Optical Society of America, 473.
TILTON, L. W., E. E. HILL and A. Q. TOOL Regarding the Heat Treatments of Glas and Its Refractivity and Density, 490.
TOOL, A. Q., L. W. TILTON and E. E. HILL Regarding the Heat Treatments of Glas and Its Refractivity and Density, 490.
Tribo-Luminescence (D. M. Nelson), 207.
TUCKERMAN, L. B.: An Illusion Due to Pattern Interference, 488.
TUTTLE, CLIFTON: The Relation Between Diffuse and Specular Density, 483, 559.

U

Ultraviolet, Greater Dispersion in the Extreme (R. J. Lang and Stanley Smith), 523.
Uranium as an Activator of Luminescence (E. L. Nichols and Mabel K. Slattery), 449, 487.

V

Vacuum Tube Voltmeter (A. L. Fitch), 71.
Value Sensitivity and Value Scales (A. E. O. Munsell and Prentice Reeves), 481.
Valves for Gases, Capillary (J. J. Hopfield), 391.
VENABLE, WILLIAM MAYO: A Classification of the Lines of the Secondary Spectrum of Hydrogen, 487.
VENABLE, WILLIAM MAYO: The Stimuli for the Visual Sensations, 492.
Viscosity of Glass, Analysis of Recent Measurements of (G. S. Fulcher), 478.
Visibility and Glare, The Fundamentals of (L. L. Holladay), 492.
Visual Sensations, The Stimuli for the (William Mayo Venable), 492.
Visual Sensory Reflex Action with Intensity of Stimulation, The Variation of (Frank Allen), 493.
VOSBURGH, WARREN C.: Eppley Unsaturated Standard Cells at High Temperatures, 393.
VOSBURGH, WARREN C.: The Applicability of Wolff's Temperature Formula for the Weston Standard Cell, 511.

W

Wedges, Note on Technique of Making Turbid (P. V. Wells), 488.
WELLS, P. V.: Note on Technique of Making Turbid Wedges, 488.
WENSEL, H. T. and C. O. FAIRCHILD: Methods and Computations in Optical Pyrometry, 474.
Weston Standard Cell, The Applicability of Wolff's Temperature Formula for the (Warren C. Vosburgh), 511.
WETZEL, R. A.: A Simple Spectrometer and an Inexpensive Spectrograph for High School Laboratory Students, 475.
WHITMAN, V. E.: Data on the Flow of Electric Current in Quartz, 31.
WILSEY, R. B. and H. A. PRITCHARD: A Comparison of X-Ray and White Light

Exposures in Photographic Sensitometry, 484, 661.
Wolff's Temperature Formula for the Weston Standard Cell, The Applicability of (Warren C. Vosburgh), 511.

X

X-Rays, On the Theory of Dispersion of (R. de L. Kronig), 547.
X-Ray and White Light Exposures in Photographic Sensitometry, A Comparison of (R. B. Wilsey and H. A. Pritchard), 661.
X-Ray Spectrograph (George L. Clark, Elmer W. Brugmann and Robert H. Aborn), 379.
X-Ray Spectrometer (Warren W. Nicholas), 45.

INDEX TO NOTES

A

ATHANASIU, G.: Monochromatic Illuminator for the Ultraviolet, the Visible, and the Near Infrared, 52.

B

BÄCKLIN, E.: Interval of the Kα-Doublets of Light Elements, 378.
BANERJI, B. N.: Striations in the Positive Column of a Discharge in a Rarefied Pure Gas, 472.
BEUTLER, H. and M. POLANYI: Luminosity Accompanying Reactions with Na Vapor: 395.
BLACKETT, P. M. S. and J. FRANCK: Dissociation of Hydrogen Molecules by Electron Impacts, 612.
BLAU, M.: Photographic Registration of Protons, 658.
BOHR, N.: Speculations on Encounters Between Electrons and Atoms, 658.
BOOMER, E. H.: Chemically Active Helium, 194.
BOTHE, W. and H. GEIGER: Crucial Experiments on X-Ray Scattering, 269.

C

CAYREL, J.: Observations on Crystal Detectors, 64.
COMPTON, A. H. and A. W. SIMON: Crucial Experiments on X-Ray Scattering, 269.
COMPTON, K. T.: Excitation of the Spectrum of Atomic Nitrogen, 386.
CZERNY, M.: Rotation-Spectrum of HCl Vapor, 690.

D

DAECKE, H.: Sub-Electrons, 78.
DAUVILLIER, A.: Dissipation of Energy in a Low-pressure Gas-discharge, 216.
DEMBER, H.: Influence of Electron-Bombardment upon Photoemission from Al, 358.
DIEKE, G. H.: Speculations on the Relative Intensities of Lines Constituting Bands, 130.
DÖPEL, R.: Photoelectric Effect of Thin Films of Sr, 130.
DUFFENDACK, O. S. and H. HUTHSTEINER: Attempt to Determine the Ionizing-Potential of Phosphorus, 622.
DYMOND, E. G.: Dissociation and Fluorescence of Iodine Vapor, 660.

E

ELLIS, C. D. and W. A. WOOSTER: Heating Effect of the Gamma-rays of RaB and RaC, 448.

F

FERMI, E. and F. RASETTI: Depolarization of Resonance Radiation by Alternating Magnetic Field, 622.
FREY, A.: Dichroism Exhibited by Fibers Permeated with Elements, 30.

G

GEISS, W. and J. VAN LIEMPT: Effect of Cold-drawing on the Density of Tungsten, 392.
GEORGE, HENRI: Two New Mercury Vapor Lamps, 46.
GIEBE, E. and A. SCHEIBE: Demonstration-Experiment Showing Forced Vibrations of a Piezoelectric Crystal, 395.
DE-GRAMONT-DE-GUICHE, A.: The Institute of Optics, Theoretical and Applied, 74.
GUNTHERSCHULZE, A.: Normal Cathode Fall and Correlated Features of the Noble Gases, 698.
GYEMANT, A.: Theory of the Electrical Breakdown of Emulsions, 216.

H

HAASE, O. and E. SCHMID: Deformation of Single Crystals of Zn, Sn, and Bi, 373.
HARKINS, W. D. and S. B. STONE: Mingling of the Isotopes of Chlorine and Silicon in Meteorites, 206.
HEILAND, C.: Instruments and Methods for Locating Valuable Deposits, 557.
HENDERSON, G. H.: Capture and Loss of Electrons by Alpha-Particles, 395.
HERTZ, G.: Resonance-Lines of Neon, 348.
HOGNESS, T. R.: Results of Impacts of Electrons Against Hydrogen Molecules, 64.
HUND, F.: Relative Energy-Values of Various Ion-Lattices, 654.

I

INGERSOLL, L. R. and S. S. DE VINNEY: Non-magnetic Films of Nickel, 14.

J

JAGER, F. M. and D. W. DYKSTRA: Mingling of the Isotopes of Chlorine and Silicon in Meteorites, 206.

K

KAPITZA, P. L. and H. W. B. SKINNER: Zeeman Effect in Strong Magnetic Fields, 205.

KLEMPERER, O.: Energy-losses suffered by fast electrons traversing thin laminae of Al and Ni, 546.

L

LAFAY, M. A.: Precision Refractometer for Liquids, 52.

LANGMUIR, I.: Electrons in the Positive Column of Low-Voltage Arcs, 566.

LENOUVEL, L.: A Study of Objectives for Copying, 44.

LENOUVEL, L.: Test of Objectives by Means of a Wedge of Air, 44.

LEPAUTE, HENRY: Neon Lamp Stroboscope, 74.

LINDMAN, K. F.: Behavior of Optically-Active Crystals Illustrated by Space-Lattices of Hertzian Resonators, 377.

M

MARK, H. and L. SZILARD: X-Ray Scattering by Molecules with Equal Numbers but Different Arrangements of Electrons, 374.

MARK, H. and S. TOLKSDORF: X-Ray Scattering by Molecules with Equal Numbers but Different Arrangements of Electrons, 374.

MECKE, R.: Spectra of Ionized Molecules, 396.

MEGGERS, W. F.: Analysis of the Spectrum of Once-Ionized Vanadium, 320.

MEISSNER, K. W.: Metastable States of Argon and Neon Identified by Absorption Experiments, 654.

MERTON, T. R. and J. G. PILLEY: Excitation of the Spectrum of Atomic Nitrogen, 386.

MOHLER, F. L.: Positive and Negative Ions Resulting When Electrons are Projected Into Gases, 565.

MOLL, W. J. H. and H. C. BURGER: Vacuum Thermocouples, with an Application to the Improvement of the Optical Lever, 206.

MULOT, MARCEL: Application of Shadow Fringes to the Study of Deformations in Mica, 52.

N

NECTOUX, A.: Notes on the Calculation of Stigmatic Spectacle Lenses, 44.

O

ORNSTEIN, L. S.: Statistical Equilibrium Between Neutral Atoms, Ionized Atoms and Detached Electrons, 546.

P

PERUCCA, E.: Electrification by Impact of Hg Vapor Against Metal, 566.

PESCHARD, M.: Magnetic Properties of Iron-Nickel Alloys, 118.

POLANYI, M. and E. SCHMID: Behavior of Tin Crystals under Tension and Heat Treatment, 226.

POLANYI, M. and G. SACHS: Elasticity and Plasticity of Single Crystals of Rocksalt, 396.

R

RAY, B.: Alterations of the X-Ray Spectrum of Sulphur Atoms Caused by Altering Their Chemical State, 392.

RICHTER, J.: Reflection from Very Thin Sputtered Films of Ag and Cu, 447.

RIDING, R. W. and E. C. C. BALY: Transmutation of Nitrogen into Helium and Neon, 216.

S

SCHÜLER, H. and K. L. WOLF: Continuous Spectrum of Hydrogen, 378.

SELJAKOW, N.: Atom-lattice of certain glasses and certain modifications of SiO_2, 320.

SPONER, H.: Stationary States of the Nitrogen Molecule, 690.

STETTER, G.: Determination of the Charge-Mass Ratio for Protons, 689.

STEUBING, W.: Influence of Magnetic Field and of Admixed Gases on the Emission Spectrum of Iodine, 348.

SUHRMANN, R.: Photoelectric Current Elicited from Pt, Au, Ag, by Black Radiation, 385.

T

TARDY, H. L.: Notes on the Calculations of Triple Aplanatic Objectives Having Equal Internal Curvatures, 74.

TINGWALDT, C.: Secondary Electron Emission from de-gassed Platinum, 657.

V

VAN DER PIJL, CH. W.: On the Stigmatic and Orthoscopic Corrections, 30.

W

WIGAND, A.: The Measurement of Visibility with a Visibility Meter (Sichtmesser), 557.

WILLIAMS, E. J.: Effect of Temperature and of Admixed Cd, In and Mg on the Electrical Resistance of Hg, 448.

WILLIAMS, E. J. and T. J. JONES: Effect of Magnetic Field on Resistance of Liquid Metals, 14.